

EPA General Permit WAG130000 - Annual Report



Annual Report of Operations
for Year 2017

To comply with NPDES General Permit No. WAG130000 for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of the State of Washington

NPDES # for your Facility:

13-0012

Facility & Owner Information

Facility Name:
BERNIE KAI KAI GOBIN SALMON HATCHERY

Operator Name (Permittee):
TULALIP TRIBES OF WASHINGTON

Address:
6406 MARINE DRIVE
TULALIP, WA 98271

Email:
mcrewson@tulaliptribes-nsn.gov

Phone:
360-716-4626

Owner Name (if different from operator):
SAME

Email:
SAME

Phone:
SAME

Best Management Practices (BMP) Plan

Has the BMP Plan been reviewed this year? ☒ Yes ☐ No

Does the BMP Plan fulfill the requirements of the General Permit? ☒ Yes ☐ No

Summarize any changes to the BMP Plan since the last annual report. Attach additional pages if necessary.

Re-routed formalin effluent lines, conducted testing (test strips and quantifiable colorimetric), determined in compliance with discharge concentrations well below label directions, revamped chemical recording protocols.

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Operations and Production

Total harvestable weight produced in the past calendar year in pounds (lbs): 66,947 lb weight gain; 72,621 total biomass
Pounds of food fed to fish during the maximum month:
6,406 lb

List the species grown or held at your facility and the annual production of each in gross harvestable weight. If fish were released rather than harvested, list the weight at time of release.

Species	Fish Produced	Receiving Water(s) to which Fish were Released	Month Released/Spawned
BY16 Chinook	20,545bs total biomass	No releases/harvests, fish transferred to 130013 for release, wt = biomass* transferred	N/A
BY15 Coho	24,054lbs total biomass	No releases/harvests, fish transferred to 130013 for release, wt = biomass* transferred	N/A
BY16 Chum	2,129 lbs total biomass	No releases/harvests, fish transferred to 130014 for release, wt = biomass* transferred	N/A
BY16 Coho	27,396lbs total biomass	No release/harvest/spawn, wt is calendar year biomass*	N/A
BY15 Cutthroat	841lbs total biomass	Planted 7,500 of 9,255 in Ross Lake (Tulalip Reservation)	May

Fill in the table below with production numbers from the past year. List the **maximum** amount of fish on-site and the maximum amount of food fed **per month**.

Month	Total Fish (lbs)	Fish Feed (lbs)	Month	Total Fish (lbs)	Fish Feed (lbs)
January	21,111	2,628	July	8,433	2,080
February	26,374	5,246	August	13,314	1,998
March	31,917	6,406	September	15,828	5,204
April	47,513	4,830	October	20,056	5,732
May	60,379	3,752	November	24,651	4,016
June	69,320	1,772	December	27,612	2,300

Additional Comments: Note, NO FISH ARE RELEASED FROM THIS FACILITY (13-0012). ALL SALMON ARE TRANSFERRED TO THE OTHER TWO FACILITIES (132-0013 AND 13-0014) FOR RELEASE, WHILE TROUT ARE TRUCKED AND RELEASED INTO ROSS LAKE. These are total biomass weights and feed fed, which do not relate to each other. The WEIGHT GAINED for these months (not shown) relates to feed fed, which subtracts starting weight at Jan 1 for the year at this facility, or for any given month's weight gained. This is more relevant for the other two facilities, which start with the ending weights shown here.

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Solid Waste Disposal

Describe the solid waste disposed of during the calendar year (including fish mortalities).

Type of Solid Disposed	Date Disposed	Location Disposed
600Lb Adult coho carcasses	Nov.-Dec. 2017	Offsite burial pit
2,340Lb Adult chum carcasses	December 2017	Offsite burial pit
252Lb dead eggs (all 3 species)	Sept.-Dec. 2017	Offsite burial pit
10 Lb juv. fish morts (all 3 species)	Jan.-Dec. 2017	Offsite burial pit
Additional Comments: Fish waste comment		

Fish Mortalities

Include a description and the dates of mass mortalities in the past year (more than 5% per week). Attach additional pages, if necessary. Include total mortalities from all causes.

Date	Cause of Deaths	Steps Taken to Correct Problem	Pounds of Fish
No mass mortality incidents			
Additional Comments: The instruction is confusing and should be re-written. You should remove, "Include total mortalities from all causes" and change the parenthesis to: (only include mortalities > 5% per week from all causes) - otherwise, it implies you want all morts from all causes...			

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Noncompliance Summary

Include a description and the dates of noncompliance events (including spills), the reasons for the incidents, and the steps taken to correct the problems. Attach additional pages, if necessary.

None

Inspections & Repairs for Production & Wastewater Treatment Systems

Date Inspected	Date Repaired	Description of System Inspected and/or Repaired
None Needed		

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Aquaculture Drugs and Chemicals

Please indicate whether you used each drug/chemical **during the past calendar year**.
Describe the use of each drug/chemical in more detail on the following pages.

Used in the past year?	Drug or Chemical
<input type="checkbox"/> Yes <input type="checkbox"/> No	Azithromycin
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Chloramine-T: <i>See additional reporting requirements on page 7</i>
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Chlorine
<input type="checkbox"/> Yes <input type="checkbox"/> No	Draxxin
<input type="checkbox"/> Yes <input type="checkbox"/> No	Erythromycin - injectable
<input type="checkbox"/> Yes <input type="checkbox"/> No	Erythromycin - medicated feed
<input type="checkbox"/> Yes <input type="checkbox"/> No	Florfenicol (Aquaflor)
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Formalin - 37% formaldehyde: <i>See additional reporting requirements on page 7</i>
<input type="checkbox"/> Yes <input type="checkbox"/> No	Herbicide - describe:
<input type="checkbox"/> Yes <input type="checkbox"/> No	Hormone - describe:
<input type="checkbox"/> Yes <input type="checkbox"/> No	Hydrogen Peroxide: <i>See additional reporting requirements on page 7</i>
<input type="checkbox"/> Yes <input type="checkbox"/> No	Iodine: <i>See additional reporting requirements on page 7</i>
<input type="checkbox"/> Yes <input type="checkbox"/> No	Oxytetracycline
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Potassium Permanganate: <i>See additional reporting requirements on page 7</i>
<input type="checkbox"/> Yes <input type="checkbox"/> No	Romet
<input type="checkbox"/> Yes <input type="checkbox"/> No	SLICE (emamectin benzoate)
<input type="checkbox"/> Yes <input type="checkbox"/> No	Sodium Chloride - salt
<input type="checkbox"/> Yes <input type="checkbox"/> No	Vibrio vaccine
<input type="checkbox"/> Yes <input type="checkbox"/> No	Other:
<input type="checkbox"/> Yes <input type="checkbox"/> No	Other:

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Aquaculture Drugs and Chemicals (cont'd)

Describe all drug and/or chemical treatments that occurred during the year. Fill out the information below for each drug or chemical, plus page 7 for water-borne treatments. Attach additional pages as necessary.

Brand Name: Chloramine T		Generic Name: Chloramine T	
Reason for use: Bacterial gill disease			
<input type="checkbox"/> Preventative/Prophylactic <input checked="" type="checkbox"/> As-needed	Total quantity of formulated product per treatment (specify units): 580 g/day	Total quantity of formulated product used in past year (specify units): 1,740 grams +	
Date(s) of treatment: 4/17, 4/18, 4/19/17		Total number of treatments in past year: 3	
Maximum daily volume of treated water: 10,200 gallons	Treatment concentration (specify units): 15 mg/l	Duration and frequency of treatment(s): 60 minutes	
Method of application:			
<input type="checkbox"/> Static Bath <input checked="" type="checkbox"/> Flow-through		<input type="checkbox"/> Medicated Feed <input type="checkbox"/> Other (describe):	
Location in facility chemical was used (check all that apply):	<input checked="" type="checkbox"/> Raceways <input type="checkbox"/> Incubation building	<input type="checkbox"/> Ponds <input type="checkbox"/> Off-line settling basin <input type="checkbox"/> Other (describe):	
Where did water treated with this chemical go? (check all that apply):	<input type="checkbox"/> Discharged w/o treatment <input type="checkbox"/> Settling basin	<input type="checkbox"/> Septic System <input type="checkbox"/> Publicly owned treatment works <input checked="" type="checkbox"/> Other (describe): No discharge*	
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use: <small>* No discharge so did not fill out flow thru treatment page. Diverted all treated water to Pond C with no leakage and retained treated water in empty pond to break down/neutralize w/sodium thiosulfate. Held treated water in Pond C for a few days to break down, which it did not, so added 16 lb sodium thiosulfate (4 parts sodium thiosulfate to 1 part Chloramine T; Lb:Lb) and then measured amount of total chlorine, with Hach test kit (model #CN-70) capable of measuring down to 0 ppm, and after neutralizing, there was no measurable chlorine remaining, so it was discharged.</small>			

Brand Name: Potassium Permanganate		Generic Name: Potassium Permanganate	
Reason for use: Gill disease			
<input type="checkbox"/> Preventative/Prophylactic <input checked="" type="checkbox"/> As-needed	Total quantity of formulated product per treatment: 1,092 grams	Total quantity of formulated product used in past year (specify units): 14,190 Kg	
Date(s) of treatment: All are in 2017: 2/18, 3/5, 3/12, 3/19, 3/26, 4/2, 4/9, 4/12, 4/14, 4/16, 4/23, 4/30, and 5/1/17		Total number of treatments in past year: 13	
Maximum daily volume of treated water: 229,590 gallons	Treatment concentration (specify units): 1,610ug/L*	Duration and frequency of treatment(s): 60-90 minutes: 5 @ 60, 7 @ 90, 1 @ 73	
Method of application:			
<input type="checkbox"/> Static Bath <input checked="" type="checkbox"/> Flow-through		<input type="checkbox"/> Medicated Feed <input type="checkbox"/> Other (describe):	
Location in facility chemical was used (check all that apply):	<input type="checkbox"/> Raceways <input type="checkbox"/> Incubation building	<input checked="" type="checkbox"/> Ponds <input type="checkbox"/> Off-line settling basin <input type="checkbox"/> Other (describe): Pond D	
Where did water treated with this chemical go? (check all that apply):	<input checked="" type="checkbox"/> Discharged w/o treatment <input type="checkbox"/> Settling basin	<input type="checkbox"/> Septic System <input type="checkbox"/> Publicly owned treatment works <input type="checkbox"/> Other (describe):	
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use: * target was 2,000ug/L. This was the actual concentration based on amounts of product added and actual flows measured.			

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Aquaculture Drugs and Chemicals (cont'd)

Describe all drug and/or chemical treatments that occurred during the year. Fill out the information below for each drug or chemical, plus page 7 for water-borne treatments. Attach additional pages as necessary.

Brand Name: Parasite-S		Generic Name: Formalin (37% formaldehyde)	
Reason for use: Control fungus on eggs			
<input checked="" type="checkbox"/> Preventative/Prophylactic <input type="checkbox"/> As-needed	Total quantity of formulated product per treatment (specify units): 13.35 liters	Total quantity of formulated product used in past year (specify units): 665.75 liters +	
Date(s) of treatment: 57 treatments from 9/19/17 through 12/30/17, see attached writeup.			Total number of treatments in past year: 57
Maximum daily volume of treated water: 13,078 liters	Treatment concentration (specify units): 1,667 mg/L target*	Duration and frequency of treatment(s): 15 minutes	
Method of application:			
<input type="checkbox"/> Static Bath <input type="checkbox"/> Medicated Feed <input checked="" type="checkbox"/> Flow-through <input type="checkbox"/> Other (describe):			
Location in facility chemical was used (check all that apply):			
<input type="checkbox"/> Raceways <input type="checkbox"/> Ponds <input type="checkbox"/> Other (describe): <input checked="" type="checkbox"/> Incubation building <input type="checkbox"/> Off-line settling basin			
Where did water treated with this chemical go? (check all that apply):			
<input type="checkbox"/> Discharged w/o treatment <input type="checkbox"/> Septic System <input checked="" type="checkbox"/> Other (describe): <input type="checkbox"/> Settling basin <input type="checkbox"/> Publicly owned treatment works Formalin retention tank*			
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use:			
<small>* While 1,667 mg/L was the target concentration, testing revealed we were only treating at 240mg/L. We did not fill out the flow through treatment page because we directly estimated the maximum concentration in the effluent over the treatment period using two different methods (1) Quantofix test strips and 2) Colorimetric UV/Visible spectrophotometer Amtest method NIOSH 3500; AMTEST Identification Number 18-A000080. This and untreated water entered the formalin settling tank and came out further diluted to 40mg/L. This was then re-routed to a large effluent pipe carrying 1,300gpm, resulting in <1ppm discharged.</small>			

Brand Name:		Generic Name:	
Reason for use:			
<input type="checkbox"/> Preventative/Prophylactic <input type="checkbox"/> As-needed	Total quantity of formulated product per treatment:	Total quantity of formulated product used in past year (specify units):	
Date(s) of treatment:			Total number of treatments in past year:
Maximum daily volume of treated water:	Treatment concentration (specify units):	Duration and frequency of treatment(s):	
Method of application:			
<input type="checkbox"/> Static Bath <input type="checkbox"/> Medicated Feed <input type="checkbox"/> Flow-through <input type="checkbox"/> Other (describe):			
Location in facility chemical was used (check all that apply):			
<input type="checkbox"/> Raceways <input type="checkbox"/> Ponds <input type="checkbox"/> Other (describe): <input type="checkbox"/> Incubation building <input type="checkbox"/> Off-line settling basin			
Where did water treated with this chemical go? (check all that apply):			
<input type="checkbox"/> Discharged w/o treatment <input type="checkbox"/> Septic System <input type="checkbox"/> Other (describe): <input type="checkbox"/> Settling basin <input type="checkbox"/> Publicly owned treatment works			
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use:			

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Aquaculture Drugs and Chemicals (cont'd)

Describe all drug and/or chemical treatments that occurred during the year. Fill out the information below for each drug or chemical, plus page 7 for water-borne treatments. Attach additional pages as necessary.

Brand Name: Terramycin 200		Generic Name: Oxytetracycline	
Reason for use: Bacterial kidney disease in coho			
<input type="checkbox"/> Preventative/Prophylactic <input checked="" type="checkbox"/> As-needed	Total quantity of formulated product per treatment (specify units): 280lb med. feed	Total quantity of formulated product used in past year (specify units): 2,800 lbs TM-200 medicated feed (10 days)	
Date(s) of treatment: 9/18/17-9/27/17			Total number of treatments in past year: 1 (10 days X 2 ponds)
Maximum daily volume of treated water: N/A*	Treatment concentration (specify units): TM med. feed @ 2% BW/Day	Duration and frequency of treatment(s): Daily for 10 days	
Method of application:	<input type="checkbox"/> Static Bath <input type="checkbox"/> Flow-through	<input checked="" type="checkbox"/> Medicated Feed <input type="checkbox"/> Other (describe):	
Location in facility chemical was used (check all that apply):	<input type="checkbox"/> Raceways <input type="checkbox"/> Incubation building	<input checked="" type="checkbox"/> Ponds <input type="checkbox"/> Off-line settling basin <input type="checkbox"/> Other (describe): Ponds A and B	
Where did water treated with this chemical go? (check all that apply):	<input type="checkbox"/> Discharged w/o treatment <input type="checkbox"/> Settling basin	<input type="checkbox"/> Septic System <input type="checkbox"/> Publicly owned treatment works <input checked="" type="checkbox"/> Other (describe): Medicated feed (not discharged)	
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use: Medicated feed treatment, no discharge or water treated			

Brand Name:		Generic Name:	
Reason for use:			
<input type="checkbox"/> Preventative/Prophylactic <input type="checkbox"/> As-needed	Total quantity of formulated product per treatment:	Total quantity of formulated product used in past year (specify units):	
Date(s) of treatment:			Total number of treatments in past year:
Maximum daily volume of treated water:	Treatment concentration (specify units):	Duration and frequency of treatment(s):	
Method of application:	<input type="checkbox"/> Static Bath <input type="checkbox"/> Flow-through	<input type="checkbox"/> Medicated Feed <input type="checkbox"/> Other (describe):	
Location in facility chemical was used (check all that apply):	<input type="checkbox"/> Raceways <input type="checkbox"/> Incubation building	<input type="checkbox"/> Ponds <input type="checkbox"/> Off-line settling basin <input type="checkbox"/> Other (describe):	
Where did water treated with this chemical go? (check all that apply):	<input type="checkbox"/> Discharged w/o treatment <input type="checkbox"/> Settling basin	<input type="checkbox"/> Septic System <input type="checkbox"/> Publicly owned treatment works <input type="checkbox"/> Other (describe):	
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use:			

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Aquaculture Drugs and Chemicals (cont'd)

Additional Reporting Requirements for Water-Borne Treatments

- If a water-borne treatment was used during the calendar year, Permittees must include detailed records/calculations as an attachment to this Annual Report in order to demonstrate how the maximum effluent concentrations of solution and active ingredient were calculated for each chemical.
- EPA recognizes that water-borne treatments may vary in the volume of the vessels treated, concentration, quantity of product, etc. Permittees must provide the information listed in the following tables for a reasonable worst case (i.e., maximum effluent concentration) scenario, not for each individual treatment.
- Permittees must submit this information and calculate the maximum effluent concentration for each water-borne chemical used during the past calendar year.
- See also Appendix D for the Chemical Log Sheet.

Static Bath Treatments	
Tank Volume	Liters
Desired Static Bath Treatment Concentration	µg/L
Volume of Product Needed	Liters Product
Maximum Effluent Concentration of: 1) Solution and 2) Active Ingredient	<div style="display: flex; justify-content: space-between;"> <div>Solution:</div> <div>Active Ingredient:</div> </div> <div style="text-align: right;">Specify Units</div>
Minimum Volume of Total (treated + untreated) Water Discharged from the Facility per day	Specify Units
Maximum % of Facility Discharge Treated	% of Total Discharge

Flow-Through Treatments	
Tank Volume	<div>229,590 gallons</div> <div style="text-align: right;">Liters</div>
Calculated Flow Rate	<div>2,407 gpm</div> <div style="text-align: right;">Liters/Minute</div>
Duration of Treatment	<div>60-90 min</div> <div style="text-align: right;">Minutes</div>
Desired Flow-Through Treatment Concentration of Product	<div>2,000 ug/L</div> <div style="text-align: right;">µg/L</div>
Amount of Product to Add Initially	<div>0</div> <div style="text-align: right;">Liters Product</div>
Amount of Product to Add During Treatment	<div>1,092 grams (average for total treatment or 14.88 g/minute average)</div> <div style="text-align: right;">mL/Minute</div>
Total Volume of Product Needed	<div>1,092 grams (average; range 823-1,399g)</div> <div style="text-align: right;">Liters Product</div>
Maximum Effluent Concentration of: 1) Solution and 2) Active Ingredient	<div style="display: flex; justify-content: space-between;"> <div>Solution: 2,017.58ug/L</div> <div>+</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Active Ingredient: same</div> <div>+</div> <div>Specify Units</div> </div>
Minimum Volume of Total (treated + untreated) Water Discharged from the Facility per day	<div>5,689,174 gallons per day (May)</div> <div style="text-align: right;">Specify Units</div>
Maximum % of Facility Discharge Treated	<div>4% (Treated/Total)</div> <div style="text-align: right;">% of Total Discharge</div>

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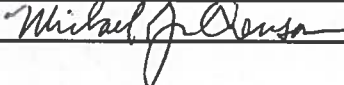
Changes to the Facility or Operations

Describe any changes to the facility or operations since the last annual report.

None

Signature and Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly evaluate and gather the information submitted. Based on my inquiry of the person or persons, who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Printed name of person signing	Title
Michael J. Crewson	Salmonid Enhancement Scientist
Applicant Signature 	Date Signed 1/19/18

Submittal Information

Send the complete, signed information, along with any attachments, to the following address:

U.S. EPA Region 10, OWW-191
Washington Hatchery Annual Report
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140